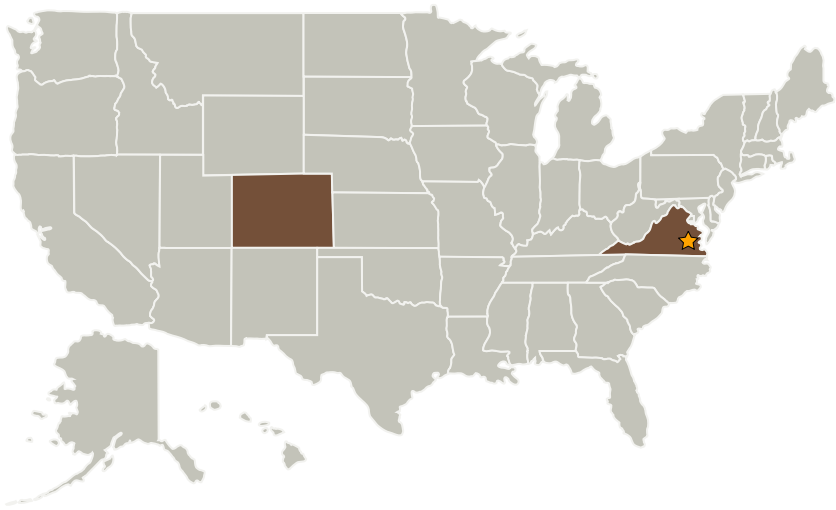
Large Format Uncooled Focal Plane Array, Phase II

Completed Technology Project (2004 - 2006)

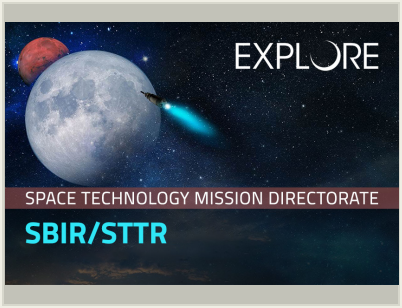
Project Introduction

Black Forest Engineering has identified innovative modifications in uncooled focal plane array (UFPA) architecture and processing that allows development of large format long wavelength infrared (8-14 ?m) imaging sensors to meet future NASA system requirements for a light weight, low power, and radiation tolerant imager. These modifications allow development of bolometer-based large format UFPA, with a pixel pitch of 20-?m and 1024x768 pixel elements with sensitivity comparable to commercially available UFPAs with 30-?m pixel pitch. The identified modifications are applicable to amorphous silicon bolometer-based UFPAs, such as those manufactured by Raytheon Commercial Infrared in Dallas, Texas.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Langley Research Center(LaRC)	Lead Organization	NASA Center	Hampton, Virginia
Black Forest Engineering, LLC	Supporting Organization	Industry	Colorado Springs, Colorado



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Langley Research Center (LaRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations	
Colorado	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.1 Detectors and Focal Planes